

ATTACHMENT TO AEP:NRC:1147A
DONALD C. COOK NUCLEAR PLANT
CORRECTED ANNUAL OPERATING REPORT PAGES

9103280267 910325
PDR ADQCK 05000315
R PDR

3.0 STEAM GENERATOR IN-SERVICE INSPECTION

3.1 UNIT 1 INSPECTION SUMMARY

One hundred percent of the tubes in all four steam generators of Unit 1 were bobbin coil eddy current inspected. All tubes were tested utilizing a 0.720 inch diameter probe with the exceptions of rows 1 through 4 U-bends that would not allow a 0.720 inch probe to pass. A 0.700 or 0.680 inch probe was used for the U-bend inspections only.

The bobbin coil test frequencies used were as follows:

- 400 kHz as the prime test frequency.
- 200 kHz and the 100 kHz as supplemental frequencies.
- 10 kHz as the locator frequency

A total of 170 tubes were removed from service following this inspection due to the eddy current results. Appendix A provides inspection details concerning the indications found in each tube and whether or not the tube was plugged.

3.2 UNIT 2 INSPECTION SUMMARY

Six and one-half percent of the tubes in Unit 2 steam generators were inspected using the same method and test frequencies described for Unit 1 inspections.

All tests were conducted with a 0.720 inch diameter probe with the exception of three tubes in steam generator 23, located in Rows 1 and 2. These three tubes were tested with a 0.700 inch probe.

No degradation or pluggable indications were found.

STEAM GENERATOR NUMBER 12

<u>ROW</u>	<u>COL</u>	<u>INDIC</u>	<u>LOCATION</u>	<u>PLUGGED</u>	<u>ROW</u>	<u>COL</u>	<u>INDIC</u>	<u>LOCATION</u>	<u>PLUGGED</u>
35	44	32%	AV1 + 0 IN	NO	27	71	DI	TEH + 20.6 IN	YES
35	44	25%	AV2 + 0 IN	NO					
45	44	14%	2SPC + 0 IN	NO	38	72	24%	AV3 + 0 IN	NO
45	44	14%	1SPC + 0 IN	NO	38	72	28%	AV4 + 0 IN	NO
					36	74	15%	1SPC + 0 IN	NO
12	46	DI	TEH + 17.8 IN	YES	37	74	DI	4SPH + 0 IN	NO
23	47	DI	1SPH + 0 IN	NO	37	74	DI	1SPC + 0 IN	NO
38	47	DI	2SPH + 0 IN	NO	21	76	DI	1SPH + 0 IN	NO
43	47	19%	AV1 + 0 IN	NO	37	76	15%	2SPC + 0 IN	NO
11	48	DI	2SPH + 0 IN	NO	37	76	DI	1SPC + 0 IN	NO
14	48	DRI	TEH + 2.5 IN	YES	35	77	27%	1SPC + 0 IN	NO
13	51	DI	TEH + 21.1 IN	YES	36	77	33%	2SPC + 0 IN	NO
18	52	DI	1SPH + 0 IN	NO	37	77	33%	1SPC + 0 IN	NO
34	54	26%	AV4 + 0 IN	NO	28	78	DI	1SPH + 0 IN	NO
37	54	39%	AV4 + 0 IN	NO	33	78	22%	1SPC + 0 IN	NO
3	55	DI	1SPH + 0 IN	NO	34	78	15%	1SPC + 0 IN	NO
36	55	41%	AV1 + 0 IN	YES	31	79	28%	2SPC + 0 IN	NO
19	57	DI	1SPH + 0 IN	NO	31	79	11%	1SPC + 0 IN	NO
43	60	21%	1SPC + 0 IN	NO	29	82	27%	2SPC + 0 IN	NO
23	61	DI	1SPH + 0 IN	NO	30	82	25%	2SPC + 0 IN	NO
43	61	DI	2SPH + 0 IN	NO	15	86	DI	TEH + 20.6 IN	YES
44	62	23%	2SPC + 0 IN	NO	23	86	35%	2SPC + 0 IN	NO
42	63	27%	AV3 + 0 IN	NO	23	86	14%	1SPC + 0 IN	NO
42	63	34%	AV4 + 0 IN	NO	24	86	45%	2SPC + 0 IN	YES
42	64	14%	1SPC + 0 IN	NO	7	89	DI	2SPH + 0 IN	NO
18	65	DI	1SPH + 0 IN	NO	16	89	DI	2SPH + 0 IN	NO
42	65	17%	AV1 + 0 IN	NO	19	89	DI	1SPC + 0 IN	NO
41	66	DI	2SPC + 0 IN	NO	13	90	10%	1SPC + 0 IN	NO
					6	91	30%	1SPC + 0 IN	NO

STEAM GENERATOR NUMBER 14

ROW	COL	INDIC	LOCATION	PLUGGED	ROW	COL	INDIC	LOCATION	PLUGGED
8	30	DI	TEH + 20.9 IN	YES	44	39	37%	4SPC + 0 IN	NO
32	30	DI	1SPH + 0 IN	NO	42	40	DI	2SPH + 0 IN	NO
34	30	DI	TEH + 20.7 IN	YES	29	41	DI	1SPH + 0 IN	NO
37	30	DI	TEH + 20.5 IN	YES	38	41	DI	1SPH + 0 IN	NO
42	30	23%	1SPC + 0 IN	NO	42	41	DI	1SPH + 0 IN	NO
5	31	DI	2SPH + 0 IN	NO	45	41	19%	2SPC + 0 IN	NO
41	31	13%	1SPC + 0 IN	NO	46	41	16%	2SPC + 0 IN	NO
32	32	DI	1SPH + 0 IN	NO	21	43	DI	1SPH + 0 IN	NO
42	32	38%	1SPC + 0 IN	NO	44	43	DI	2SPC + 0 IN	NO
12	33	29%	2SPH + 0 IN	NO	46	43	24%	2SPC + 0 IN	NO
38	33	DI	TEH + 20.4 IN	YES	10	45	DI	1SPH + 0 IN	NO
30	34	DI	1SPH + 0 IN	NO	17	45	DI	TSH + .5 IN	YES
44	34	27%	1SPC + 0 IN	NO	41	45	23%	AV3 + 0 IN	NO
17	35	32%	TSH + .5 IN	YES	41	45	18%	AV4 + 0 IN	NO
33	35	DI	1SPH + 0 IN	NO	16	46	DI	TSH + 1.1 IN	YES
44	35	19%	1SPC + 0 IN	NO	22	46	DI	TEH + 21.2 IN	YES
44	36	26%	1SPC + 0 IN	NO	33	46	24%	AV2 + 0 IN	NO
45	36	16%	1SPC + 0 IN	NO	33	46	34%	AV3 + 0 IN	NO
17	37	DI	1SPH + 0 IN	NO	33	46	26%	AV4 + 0 IN	NO
29	37	DI	1SPH + 0 IN	NO	42	46	DI	TEH + 20.8 IN	YES
38	37	DI	2SPH + 0 IN	NO	46	46	19%	2SPH + 0 IN	NO
44	37	39	2SPC + 0 IN	NO	38	48	18%	TSH + 42.8 IN	NO
45	37	14%	2SPC + 0 IN	NO	32	49	DI	2SPH + 0 IN	NO
45	37	16%	1SPC + 0 IN	NO	46	49	DI	1SPH + 0 IN	NO
29	39	DI	1SPH + 0 IN	NO	8	50	DRI	TEH + 2.4 IN	YES
38	39	DI	1SPH + 0 IN	NO	12	50	DI	1SPH + 0 IN	NO
					46	50	DI	1SPH + 0 IN	NO

STEAM GENERATOR NUMBER 14

<u>ROW</u>	<u>COL</u>	<u>INDIC</u>	<u>LOCATION</u>	<u>PLUGGED</u>	<u>ROW</u>	<u>COL</u>	<u>INDIC</u>	<u>LOCATION</u>	<u>PLUGGED</u>
23	51	DI	1SPH + 0 IN	NO	26	69	15%	AV1 + 0 IN	NO
45	51	13%	2SPC + 0 IN	NO	26	69	16%	AV2 + 0 IN	NO
18	52	DRI	TEH + 2.1 IN	YES	18	70	DI	1SPH + 0 IN	NO
18	54	DRI	TEH + 2.2 IN	YES	31	70	DI	1SPH + 0 IN	NO
44	55	DI	2SPH + 0 IN	NO	30	73	DI	1SPH + 0 IN	NO
30	57	DI	1SPH + 0 IN	NO	33	73	DI	1SPH + 0 IN	NO
30	57	DI	3SPH + 0 IN	NO	39	73	16%	2SPC + 0 IN	NO
22	60	DI	1SPH + 0 IN	NO	4	74	DI	2SPH + 0 IN	NO
44	60	14%	3SPC + 0 IN	NO	5	74	DI	1SPH + 0 IN	NO
12	61	DI	1SPH + 0 IN	NO	18	74	DI	TEH + 20.6 IN	YES
17	61	DI	1SPH + 0 IN	NO	33	74	DI	1SPH + 0 IN	NO
20	61	DI	1SPH + 0 IN	NO	33	74	DI	2SPH + 0 IN	NO
30	61	DI	1SPH + 0 IN	NO	13	75	DI	1SPH + 0 IN	NO
43	61	31%	1SPC + 0 IN	NO	33	75	DI	2SPH + 0 IN	NO
13	62	DI	1SPH + 0 IN	NO	35	75	24%	2SPC + 0 IN	NO
35	62	DI	1SPH + 0 IN	NO	36	75	38%	2SPC + 0 IN	NO
19	63	22%	AV2 + 0 IN	NO	4	76	DI	2SPH + 0 IN	NO
19	63	19%	AV3 + 0 IN	NO	17	76	DI	TEH + 20.9 IN	YES
19	63	11%	AV4 + 0 IN	NO	18	76	DI	TEH + 20.9 IN	YES
6	65	DI	1SPH + 0 IN	NO	19	76	DI	TEH + 20.6 IN	YES
17	65	DI	1SPH + 0 IN	NO	31	76	DI	3SPH + 0 IN	NO
41	65	34%	2SPC + 0 IN	NO	33	76	DI	1SPH + 0 IN	NO
19	66	15%	AV1 + 0 IN	NO	36	76	21%	1SPC + 0 IN	NO
19	66	22%	AV2 + 0 IN	NO	23	77	DI	TEH + 20.8 IN	YES
19	66	24%	AV3 + 0 IN	NO	33	77	54%	2SPC + 0 IN	YES
25	66	DI	1SPH + 0 IN	NO	23	78	DI	3SPH + 0 IN	NO
34	67	DI	TEH + 20.7 IN	YES					

Docket Nos. 50-315
and 50-316

MAR 21 1991

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Mr. Milton P. Alexich, Vice President
Indiana Michigan Power Company
c/o American Electric Power Service Corporation
1 Riverside Plaza
Columbus, Ohio 43216

Dear Mr. Alexich:

SUBJECT: OPERATIONAL EVENTS WHILE SHUTDOWN

The NRC has just issued Information Notice 91-22, "Four Plant Outage Events Involving Loss of AC Power or Coolant Spills," which addresses recent events that occurred during shutdown operations.

The chief purpose of this information notice is to notify each licensee that the high rate of precursor events to loss of decay heat removal during shutdown is a source of concern to the NRC. All of the events discussed in this information notice occurred during a one-week period in March 1991. Because of the potential for loss of a critical safety function in these and similar events, I believe a high level of management attention is required in the planning, coordination, and execution of shutdown operations.

While this information notice does not require specific licensee action or response, I urge you to give this important matter your personal attention.

Sincerely,

Original signed by
Thomas E. Murley

Thomas E. Murley, Director
Office of Nuclear Reactor Regulation

cc: See next page

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1. The first part of the report is a summary of the work done during the year.

2. The second part is a detailed account of the work done during the year.

3. The third part is a summary of the work done during the year.

4. The fourth part is a summary of the work done during the year.

5. The fifth part is a summary of the work done during the year.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

MAR 21 1991

Docket Nos. 50-315
and 50-316

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Indiana Michigan Power Company
c/o American Electric Power Service Corporation
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Columbus, Ohio 43216

Dear Mr. Alexich:

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While this information notice does not require specific licensee action or response, I urge you to give this important matter your personal attention.

Sincerely,

A handwritten signature in dark ink, appearing to read "T. Murley", is written over the typed name.

Thomas E. Murley, Director
Office of Nuclear Reactor Regulation

cc: See next page

